

Dendrochronological analysis of oak timbers from Aberlady Bay pier

Slices from two waterlogged oak timbers, retrieved from the terminus of the pier in Aberlady Bay were submitted for dendrochronological analysis. Both timbers, the sleeper beam, [409] and the pile [412], were potentially viable as they displayed relatively long ring-patterns and although squared, they both retained the bark edge on at least one corner, meaning that it might be possible to determine an absolute felling date.

The surfaces of the waterlogged slices were planed with a Surform plane and then pared with a razor blade to enhance the ring-pattern. The ring-pattern was measured using *Dendro for Windows* (Tyers 1999).

Results

The timbers produced relatively long, sensitive ring-patterns (Table 1).

Table 1: dendrochronological data

Timber	No. rings	Bark edge	Calendar date
409	119	Y	/
412	138	Y	/

The sequences were initially compared with each other but did not produce any significant correlations. The individual sequences were then compared against a suite of Scottish, British and Scandinavian site and master chronologies but yielded no results. The timbers consequently remain undated.

Discussion

The lack of correlation between the timbers is surprising, given that they came from the same structure and both have long, sensitive ring-patterns which should facilitate cross-matching. Furthermore, they are of sufficient length to be able to provide correlations individually against regional master chronologies. Certainly, it has proved possible elsewhere to date single timbers of shorter length, ie a timber, 95 years in length from John Knox House, in Edinburgh (Crone 2005) and a timber, 102 years in length from the forework at Tantallon Castle (Crone 2007). In both these cases the timber was imported from Scandinavia where numerous reference chronologies are available for comparison. It is possible that the inability to date these timbers is because they are native, ie locally-grown. Native timber was increasingly scarce by the 16th/17th centuries (Crone & Watson 2002) and consequently, south-east Scotland has poor chronological coverage for this period, in other words there are few chronologies against which to compare the timbers.

References

- Crone, BA 2005 *Dendrochronological analysis of a lintel from John Knox' House, Edinburgh*. Unpubl report for CFA.
- Crone, BA 2007 *Dendrochronological analysis of a putlog timber from the forework at Tantallon Castle, East Lothian*. Unpubl report for Historic Scotland.
- Crone, B A & Watson, F 2002 'Chapter 3. Sufficiency to scarcity: medieval Scotland, 500-1600', in Smout, TC (ed) *People and woods in Scotland. A history*, 60-81. Edinburgh: EUP.